

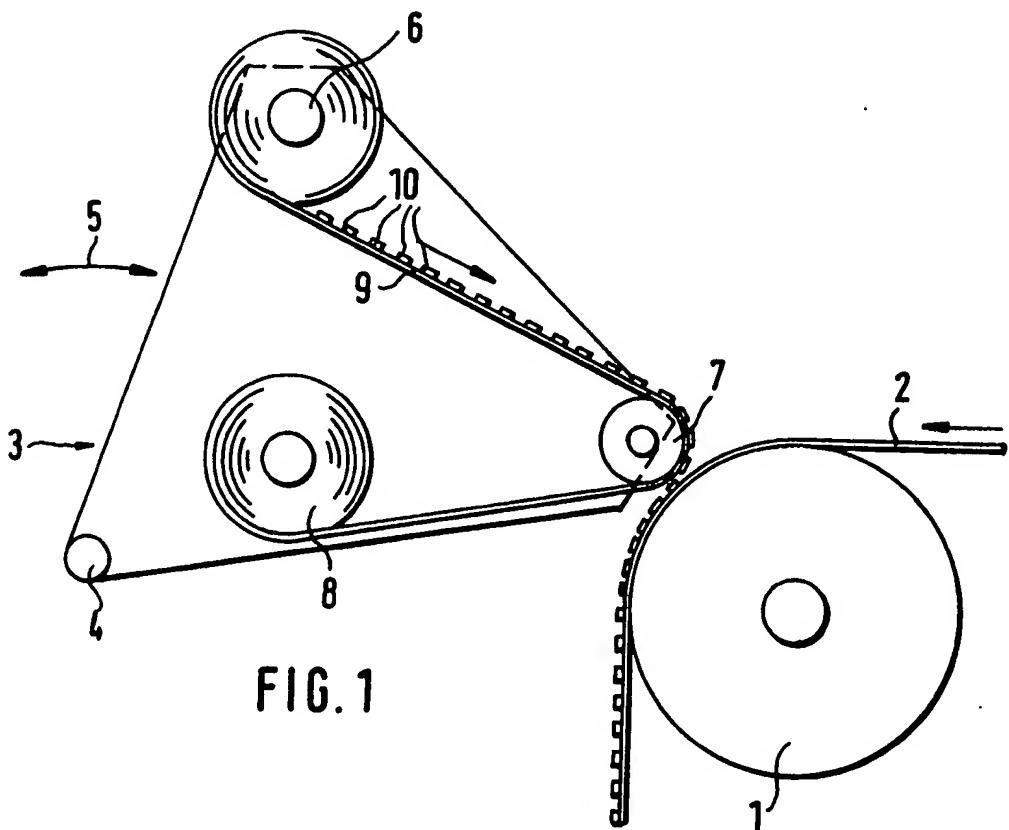
(12) UK Patent Application (19) GB (11) 2 115 375 A

(21) Application No 8235438  
(22) Date of filing 13 Dec 1982  
(30) Priority data  
(31) 3151007  
(32) 23 Dec 1981  
(33) Fed. Rep of Germany (DE)  
(43) Application published  
7 Sep 1983  
(51) INT CL<sup>3</sup>  
B32B 3/16  
(52) Domestic classification  
B8F 1C BG  
U1S 1575 1585 B8F  
(56) Documents cited  
None  
(58) Field of search  
B8F  
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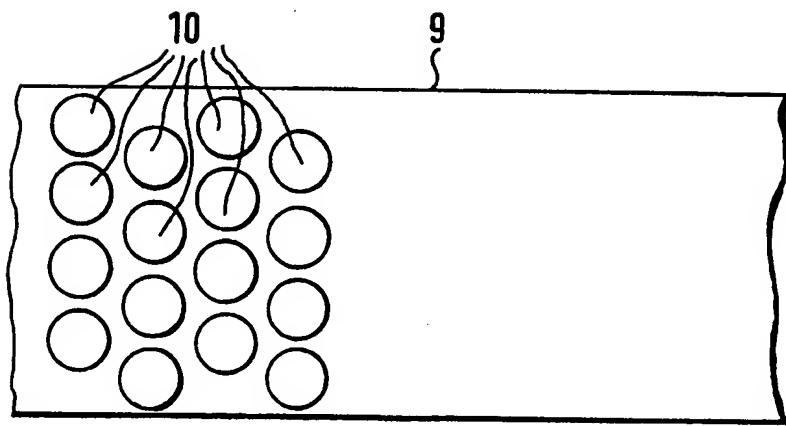
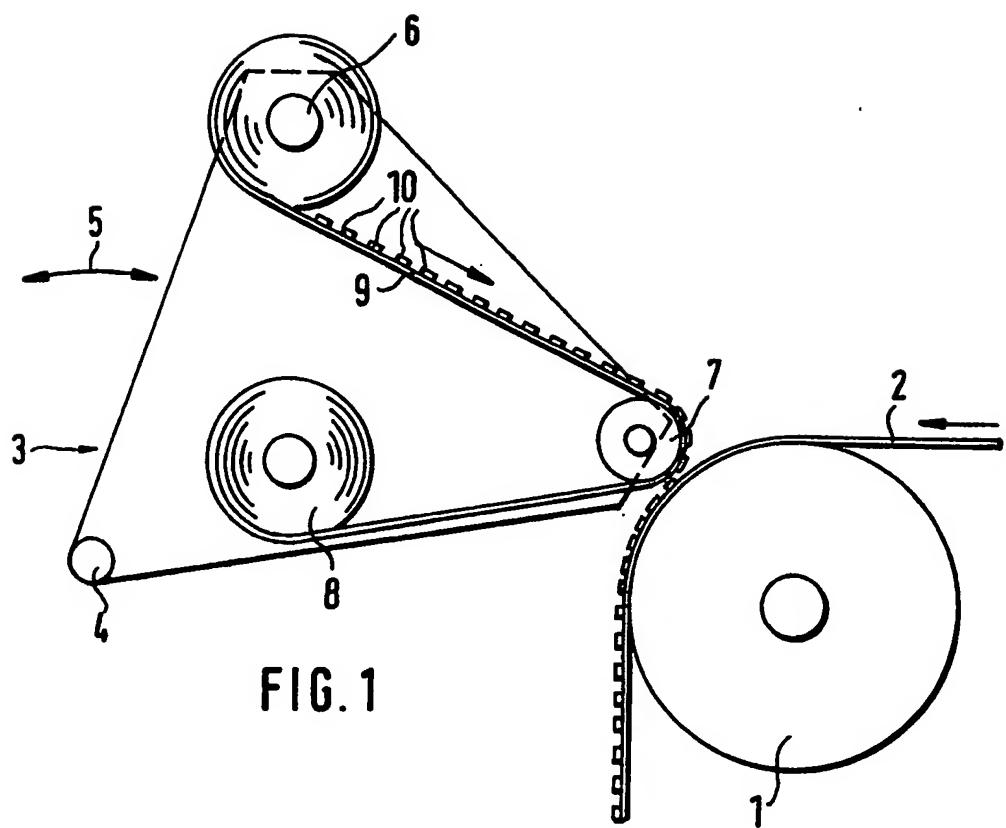
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(54) Applying adhesive pieces to a  
web strip

(57) Adhesive pieces (10) carried by a  
substrate tape (9) are applied to the  
ends of a running web strip (2), e.g. of  
plastics or paper by a swingable device  
(3) for the purpose of adhering the web  
strip to a winding core and/or of closing  
or fixing the end portion of a finished  
wound roll. Both sides of the pieces 10  
have adhesive properties. There is used  
a substrate tape with adhesive pieces  
each having an area of 3.5 to 7 mm<sup>2</sup> and  
covering 20 to 60% of the total area of  
the substrate tape, a plurality of adhe-  
sive pieces being arranged side by side  
in the width direction of the substrate  
tape.



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## SPECIFICATION

### Apparatus for applying an adhesive on a web strip

5 The present invention relates to an apparatus for applying an adhesive on a web strip, and in particular to an apparatus having a dispenser device, swingable against a web strip, guiding a substrate tape carrying self-adhesive labels for applying an adhesive on the ends of a running web strip, 10 preferably a plastics film or a paper strip, for the purpose of adhering the web strip to a winding core and/or of closing a finished winding roll.

It is known to use a substrate tape carrying 15 self-adhesive labels divided into small longitudinal sections so that always small sections of the self-adhesive material are transferred when pressing the substrate tape against the running web strip. Due to the fact that the adhesive forces of the self-adhesive 20 labels on the substrate tape are not uniform, it may happen that one self-adhesive label sticks irregularly across the width of the carrier belt and consequently is lifted on irregularly. Warping of the web strip, particularly lifting of the web strip from its base, may 25 occur, or folds or any other interruption or defect in winding up the web strip may be caused. Possibly a section may also adhere on the substrate tape.

It is an object of the present invention to provide 30 an adhesive tape for the undisturbed transfer of an adhesive on a web strip without impairment thereof and with coverage of the necessary adhesive area.

The present invention provides apparatus having 35 a dispenser device, swingable against a web strip, guiding substrate tape carrying self-adhesive labels for applying an adhesive on the ends of a running web strip for the purpose of adhering the web strip to a winding core and/or of closing a finished winding roll, wherein the substrate tape carries adhesive pieces, each having an area of 3.5 to 7 mm<sup>2</sup> 40 and covering 20 to 60% of the total area of the substrate tape, a plurality of the adhesive pieces being arranged side by side in the width direction of the substrate tape.

By means of the apparatus of the invention it is 45 ensured that the pull-off force is distributed to the individual adhesive pieces over the width of the substrate tape. The area of the individual adhesive pieces is designed in such a manner that an adhesive piece has a sufficient adhesive force to the application on the web strip, and that, on the other hand, the necessary pull-off force does not exceed an amount which could disturb lifting of the web strip. In order that this reduction of the pull-off forces and the distribution thereof have a favourable effect, the 55 total area of the substrate tape occupied by the adhesive pieces is as defined.

The invention will be further described, by way of example only, with reference to the accompanying drawings, wherein:

60 *Figure 1* is a diagrammatic view of an apparatus according to the present invention; and

*Figure 2* is a top view of the adhesive tape.

The apparatus shown in the drawings comprises a deflecting roller 1 for a web strip 2, particularly 65 consisting of a plastics film or a paper strip. A label

dispenser device 3 is swingably supported on a pivot pin 4 in the direction of the double arrow 5. The swinging mechanism for the label dispenser device 3 is not shown. The label dispenser device 3

70 comprises a delivery roller 6, a deflecting roller 7, and a winding-up roller 8. The drive of these rollers is also not shown in the drawings.

The delivery roller 6 supports a roll of a substrate tape 9 carrying adhesive pieces 10, both sides of the 75 pieces 10 having adhesive properties. A section of the substrate tape 9 is shown in Figure 2; the substrate tape 9 has a silicon coating, upon which adhesive pieces 10 are applied. The adhesive pieces 10 may have any desired shape, but are preferably

80 square or round. The adhesive pieces are distributed on the substrate tape 9 generally in the manner as shown. The adhesive pieces each have an area of 3.5 to 7 mm<sup>2</sup>, and they cover in total 20 to 60%, preferably 25 to 50%, of the total area of the 85 substrate tape.

Adhesive pieces are applied in each case on the leading portion and the end portion of the web strip to be wound up on a winding core, in order to fix the leading portion of the web strip to the winding core

90 and to close or fix the end portion of the web strip on the finished winding roll. For the transfer of the adhesive pieces 10 to the web strip 2 the label dispenser device 3 is swung to the deflecting roller 1 so that the substrate tape 9 is pressed between the

95 deflecting roller 7 and the deflecting roller 1 against the web strip 2. Thereby adhesive pieces 10 are transferred to the web strip 2, because the adherence of the adhesive on the material of the web strip 2 is higher than on the substrate tape 9. The

100 individual adhesive pieces are taken off in a correct manner. The pulling-off forces from the substrate tape do not exceed a limiting value which ensures that the web strip is not lifted from the deflecting roller 1. Even if by unfavourable conditions

105 an individual adhesive piece is not taken off from the substrate tape, this will not influence the effect of the remaining adhesive pieces. Also an adhesive application which merely comprises some adhesive pieces, less than intended, secures a safe

110 adhering of the web strip on the winding core and/or the finished winding roll.

## CLAIMS

115 1. Apparatus having a dispenser device, swingable against a web strip, guiding substrate tape carrying self-adhesive labels for applying an adhesive on the ends of a running web strip for the purpose of adhering the web strip to a winding core

120 and/or of closing a finished winding roll, wherein the substrate tape carries adhesive pieces, each having an area of 3.5 to 7 mm<sup>2</sup> and covering 20 to 60% of the total area of the substrate tape, a plurality of the adhesive pieces being arranged side by side in the 125 width direction of the substrate tape.

2. Apparatus as claimed in Claim 1, wherein 25 to 50% of the surface of the substrate tape is covered by adhesive pieces.

3. Apparatus according to Claim 1, substantially 130 as herein described with reference to, and as shown

in, the accompanying drawings.

4. A substrate tape for use in the apparatus according to Claim 1, which carries adhesive pieces, each having an area of 3.5 to 7 mm<sup>2</sup> and covering 20 to 60% of the total area of the tape, a plurality of the adhesive pieces being arranged side by side in the width direction of the substrate tape.

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Printed for Her Majesty's Stationery Office, by Croydon Printing Company Limited, Croydon, Surrey, 1983.

Published by The Patent Office, 25 Southampton Buildings, London, WC2A 1AY, from which copies may be obtained.